FAX TRANSMISSION

DATE: Julu 1, 2003

PTO IDENTIFIER: **Application Number** 09/760897
Patent Number
Inventor: John J. Harrington, et al.

MESSAGE TO: Betty J. Forman
FAX NUMBER: (703) 746-5012

FROM: LAHIVE & COCKFIELD, LLP
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PAGES (Including Cover Sheet): 13

CONTENTS:

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Request for Continued Examination Transmittal (1 page);
Preliminary Amendment (9 pages)
Fee Transmittal (1 page); and
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FEE TRANSMITTAL for FY 2003

Effective 01/01/2003. Patent fees are subject to annual revision

[X] Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 795.00

Complete if Known	
Application Number	09/760897
Filing Date	January 17, 2001
First Named Inventor	John J. Harrington
Examiner Name	Forman, BJ
Art Unit	1634
Attorney Docket No.	ATX7CP4D15CNRCE

METHOD OF PAYMENT (check all that apply)

[ ] Check [ ] Credit Card [ ] Money Order [ ] Other [ ] None

[X] Deposit Account

Deposit Account Number: 12-0080

Deposit Account Name: Lahive & Cockfield, LLP

The Director is hereby authorized to: (check all that apply)

[X] Charge fee(s) indicated below [X] Credit any overpayments

[X] Charge any additional fee(s) during the pendency of this application

[ ] Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account

FEE CALCULATION

1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1001	750	2001	375	Utility filing fee	
1002	330	2002	165	Design filing fee	
1003	520	2003	260	Plant filing fee	
1004	750	2004	375	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) ($) 0.00

2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

			Extra Claims		Fee from below		Fee Paid
Total Claims	20	20 =	0	x		=	
Independent Claims	13	3 =	10	x	42	=	420
Multiple Dependent						=	

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	84	2201	42	Independent claims in excess of 3
1203	280	2203	140	Multiple dependent claim, if not paid
1204	84	2204	42	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 420.00

**or number previously paid, if greater; For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge – late filing fee or oath	
1052	50	2052	25	Surcharge – late provisional filing fee or cover sheet.	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for *ex parte* reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	110	2251	55	Extension for reply within first month	
1252	410	2252	205	Extension for reply within second month	
1253	930	2253	465	Extension for reply within third month	
1254	1,450	2254	725	Extension for reply within fourth month	
1255	1,970	2255	985	Extension for reply within fifth month	
1401	320	2401	160	Notice of Appeal	
1402	320	2402	160	Filing a brief in support of an appeal	
1403	280	2403	140	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	110	2452	55	Petition to revive – unavoidable	
1453	1,300	2453	650	Petition to revive – unintentional	
1501	1,300	2501	650	Utility issue fee (or reissue)	
1502	470	2502	235	Design issue fee	
1503	630	2503	315	Plant issue fee	
1460	130	1460	130	Petitions to the Commissioner	
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	750	2809	375	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	750	2810	375	For each additional invention to be examined (37CFR 1.129(b))	
1801	750	2801	375	Request for Continued Examination (RCE)	375.00
1802	900	1802	900	Request for expedited examination of a design application	
Other fee (specify)					

*Reduced by Basic Filing Fee Paid SUBTOTAL (3) ($) 375.00

SUBMITTED BY				Complete (if applicable)	
Name (Print/Type)	Cynthia L. Kanik Ph.D.	Registration No (Attorney/Agent)	37,320	Telephone	(617) 227-7400
Signature				Date	July 1, 2003

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Dated: July 1, 2003 Signature: (Cynthia L. Kanik, Ph.D.)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re the application of: John J. Harrington

Serial No.: 09/760,897

Filed: January 17, 2001

For: COMPOSITIONS AND METHODS FOR NON-TARGETED ACTIVATION OF ENDOGENOUS GENES

Attorney Docket No.: ATX7CP4D15CNRCE (formerly 0221-0003O(c)

Group Art Unit: 1634

Examiner: Forman, B.

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

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July 1, 2003
Date of Signature and of Mail Deposit

By: Cynthia L. Kanik, Ph.D.
Reg. No. 37,320
Attorney for Applicants

PRELIMINARY AMENDMENT

Dear Sir:

Prior to examination of the above-identified application, please amend the application as follows:

In the claims:

Please cancel claims 55-77 and add new claims 78-97 as follows.

78. (Reinstated-formerly claim # 58) A method for producing a protein from an endogenous cellular gene comprising:

(1) introducing a vector comprising a transcriptional regulatory

sequence into a cell;

(2) maintaining said cell under conditions appropriate for integrating said vector into the genome of said cell by non-homologous recombination whereby said transcriptional regulatory sequence is operably linked to said endogenous cellular gene;

(3) maintaining said cell under conditions appropriate for expressing said endogenous cellular gene in said cell by means of said transcriptional regulatory sequence;

(4) maintaining said cell so as to produce amounts of said protein from said endogenous cellular gene; and

(5) purifying said protein.

79. (Reinstated-formerly claim # 59) A method for producing a protein from an endogenous cellular gene comprising:

(1) introducing a vector comprising a non-retrovirus transcriptional regulatory sequence into said cell;

(2) maintaining said cell under conditions appropriate for integrating said vector into the genome of said cell by non-homologous recombination whereby said transcriptional regulatory sequence is operably linked to said endogenous cellular gene;

(3) maintaining said cell under conditions appropriate for expressing said endogenous cellular gene in said cell by means of said transcriptional regulatory sequence; and

(4) maintaining said cell so as to produce amounts of said protein from said endogenous cellular gene.

80. (Reinstated-formerly claim # 60)A method for producing an expression product of an endogenous cellular gene comprising:

(1) introducing a vector comprising a transcriptional regulatory sequence operably linked to a secretion signal sequence into a cell;

(2) maintaining said cell under conditions appropriate for integrating said vector into the genome of said cell by non-homologous recombination whereby said transcriptional regulatory sequence and secretion signal sequence are operably linked to said endogenous cellular gene;

(3) maintaining said cell under conditions appropriate for expressing said endogenous cellular gene in said cell by means of said transcriptional regulatory sequence; and

(4) maintaining said cell so as to produce amounts of the expression product of said endogenous cellular gene.

81. (Reinstated-formerly claim # 61) The method of claim 60 wherein said vector further comprises an unpaired splice donor sequence operably linked to said transcriptional regulatory sequence.

82. (Reinstated-formerly claim # 62) The method of claim 60 wherein said transcriptional regulatory sequence is non-retroviral.

83. (Reinstated-formerly claim # 63) A method for producing a protein from an endogenous cellular gene comprising:

(1) introducing a vector construct comprising a transcriptional regulatory sequence operably linked to an unpaired splice donor sequence into a cell;

(2) maintaining said cell under conditions appropriate for integrating said vector construct into the genome of said cell by non-homologous recombination whereby said transcriptional regulatory sequence and unpaired splice donor sequence are operably linked to said endogenous cellular gene;

(3) maintaining said cell under conditions appropriate for expressing said endogenous cellular gene in said cell by means of said transcriptional regulatory sequence; and

(4) maintaining said cell so as to produce amounts of the protein encoded by said endogenous cellular gene.

84. (Reinstated-formerly claim # 64) The method of claim 63 wherein said transcriptional regulatory sequence is non-retroviral.

85. (Reinstated-formerly claim # 65) A method to express and screen for expression of a cellular gene comprising:

(1) introducing a vector construct into a cell and maintaining said cell under conditions appropriate for integrating said vector construct into the genome of a cell, said vector construct lacking targeting sequences and containing a transcriptional regulatory sequence and unpaired splice donor sequence, so that the coding region of a gene in the genome is operably linked to the transcriptional regulatory sequence and splice donor sequence on the vector construct; and

(2) screening said cell for expression of a protein that is encoded by said gene.

86. (Reinstated-formerly claim # 67) The method of claim 85 wherein said transcriptional regulatory sequence is non-retro viral.

87. (Reinstated-formerly claim # 67) The method of claim 85 with the additional step of isolating the cell producing the protein encoded by said gene.

88. (Reinstated-formerly claim # 68) A method to express and screen for expression of a cellular gene comprising:

(1) introducing a vector construct into a cell and maintaining said cell under conditions appropriate for integrating said vector construct into the genome of a cell by non-homologous recombination, said vector construct containing a transcriptional regulatory sequence and unpaired splice donor sequence, so that the coding region of a gene in the genome is operably linked to the transcriptional regulatory sequence and splice donor sequence on the vector construct; and

(2) screening said cell for expression of a protein encoded by the cellular gene, said gene and said upstream region of said gene lacking homology to the vector construct that would facilitate homologous recombination of the vector construct with the genome to cause expression of said gene.

89. (Reinstated-formerly claim # 69) A method to express and screen for expression of a desired phenotype in a cell comprising the steps of:

(1) constructing a vector comprising a transcriptional regulatory sequence and an unpaired splice donor sequence;

(2) delivering copies of the vector to a plurality of cells;

(3) maintaining the cells under conditions permitting non-homologous recombination between the vector and the genome of the cells, thereby expressing an endogenous gene conferring said desired phenotype; and

(4) screening the non-homologously recombinant cells by assay

for the desired phenotype to identify cells in which expression of the desired phenotype occurs.

90. (Reinstated-formerly claim # 70)A method as claimed in claim 89 wherein the desired phenotype is production of a particular protein and the assay is conducted by testing for increased production of the protein.

91. (Reinstated-formerly claim # 71) A method to express and screen for expression of a desired gene in a cell comprising the steps of:

(1) constructing a vector comprising a transcriptional regulatory sequence and an unpaired splice donor sequence;

(2) introducing said vector into at least 100,000 cells;

(3) maintaining said cells under conditions appropriate for integrating the vector by non-homologous recombination into said cells;

(4) screening the non-homologously recombinant cells produced in (3) by assay for a phenotype to identify cells in which the expression of the desired gene has been expressed.

92. (Reinstated-formerly claim # 72)A purified cell expressing a protein, said cell comprising in its genome an inserted genetic construct, the genetic construct comprising a transcriptional regulatory sequence operably linked to a splice donor sequence, said transcriptional regulatory sequence being linked effectively in the cell's genome to a gene in the genome encoding said protein so as to cause expression of said gene and said splice donor sequence being spliced to a splice acceptor sequence in said gene, the construct inserted into said gene or upstream region of said gene, said gene and upstream

region having no homology to any sequences in the genetic construct that would facilitate homologous recombination of the construct with the genome to cause expression of said gene.

93. (Reinstated-formerly claim # 73) The cell of claim 92 wherein the inserted genetic construct additionally contains an amplifiable marker.

94. (Reinstated-formerly claim # 74) A purified cell expressing a protein, said cell comprising in its genome an inserted genetic construct, the genetic construct comprising a transcriptional regulatory sequence operably linked to a splice donor sequence, said transcriptional regulatory sequence on the construct being linked effectively in the cell's genome to a gene in the genome encoding said protein so as to cause expression of said gene and said splice donor sequence being spliced to a splice acceptor sequence in said gene, the construct containing no homology to any sequences in said gene or to upstream regions of said gene that would facilitate homologous recombination of the construct with the genome to cause expression of said gene.

95. (Reinstated-formerly claim # 75) A method to express and screen for expression of a gene encoding a protein comprising:

(1) constructing a vector comprising a transcriptional regulatory sequence and an unpaired splice donor sequence;

(2) introducing said vector into a cell;

(3) maintaining the cell under conditions permitting non-homologous recombination events between the inserted vector and the genome of the cell whereby said transcriptional regulatory sequence and splice donor sequence are operably linked to said gene; and

(4) screening the recombinant cell by assay for expression of the